

Application No.: 10/612,804
Amendment dated: August 10, 2005
Reply to Office Action dated: June 10, 2005

REMARKS/ARGUMENTS

Claims 3-4 and 18-27 are pending. No claims have been amended.

Claims 23-27 were rejected under 35 U.S.C. §102(b) as being anticipated by Papathomas et al., U.S. Patent No. 5,656,862 (hereinafter "Papathomas"). Claims 3-4 and 18-22 were allowed.

Claim Rejections Under 35 U.S.C. §102(b)

Claims 23-27 were rejected under 35 U.S.C. §102(b) as being anticipated by Papathomas. Papathomas generally discloses a solder interconnection encapsulant, encapsulated structure and method for its fabrication and use (*See Abstract*).

Papathomas does not disclose filler particles dispersed *in the benzocyclobutene*, as recited by claim 23, nor does it disclose dispersing filler particles *within the benzocyclobutene* as recited by claim 25. The relevant sections of Papathomas state:

In the figure, numeral 1 represents a semiconductor chip joined to the chip carrier 2 by solder bumps 3 mated to pads 4. I/O can be in the form of pins extending and protruding from the carrier 2, with a small portion of the pins protruding from the other side of the carrier for carrying current thereto.

(*See Papathomas, Col. 3, Lines 51-53*).

The encapsulant 5 pursuant to the present invention provides for essentially void free encapsulation of the solder connections thereby assuring highly reliable devices and fills the gap forming a uniform fillet around the chip as well as covering the pin heads, circuits, vias, or solder masks under the device (not shown).

(*See Papathomas, Col. 3, Lines 62-67*).

In other words, the solder bumps 3 are surrounded by an encapsulant 5, as opposed to

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filler particles dispersed *in the benzocyclobutene*. Therefore, Papathomas does not disclose filler particles dispersed in the benzocyclobutene. The Office Action defines "disperse" as "to spread out, distribute," and under this definition the filler particles of Papathomas are certainly dispersed on carrier 2, but they are not dispersed *within the benzocyclobutene* as recited in claims 23 and 25. Applicants respectfully submit, therefore, that elements of claim 23 and 25 are neither shown nor suggested by the cited reference. Claims 24 and 26-27 depend from claims 23 and 25, respectively. Accordingly reconsideration and withdrawal of the rejection of claims 23-27 under 35 U.S.C. §102(b) is respectfully requested.

For all the above reasons, the Applicant respectfully submits that this application is in condition for allowance. A Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. §1.16 or §1.17 to Deposit Account No. 11-0600.

The Examiner is invited to contact the undersigned at (408) 975-7500 to discuss any matter concerning this application.

Respectfully submitted,
KENYON & KENYON

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KENYON & KENYON
333 West San Carlos St., Suite 600
San Jose, CA 95110

Telephone: (408) 975-7500
Facsimile: (408) 975-7501

By: Stephen T. Neal
Stephen T. Neal
(Reg. No. 47,815)
Attorneys for Intel Corporation